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EVALUATION REPORT ON WATER POLLUTION CONTROL PROGRAM PLAN FOR THE STATE OF NORTH DAKOTA DEPARTMENT OF HEALTH ENVIRONMENTAL HEALTH AND ENGINEERING SERVICES FY 1970.

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION,
KANSAS CITY, MISSOURI

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EVALUATION REPORT

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FOR THE STATE OF NORTH DAKOTA
DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH AND ENGINEERING SERVICES
FY 1970

U. S. Department of the Interior
Federal Water Pollution Control Administration
Missouri Basin Region, Planning and Program Grants
Kansas City, Missouri August 1969

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A. SUMMARY EVALUATION

1. ACCOMPLISHMENTS IN FISCAL YEAR 1969

1. In Fiscal year 1969, four municipalities requiring compliance as outlined in the Water Quality Standards completed corrective action. All but two of the 22 municipalities and industries having a compliance date have initiated or completed corrective action.

2. Regulations for the control of wastes from agricultural enterprises have been drafted and proposed for adoption.

3. A Statewide water quality monitoring program is under way. The number of State sampling stations have been increased from that originally set up in the State's Implementation Plan.

4. The State certified 11 waste treatment plant operators.

2. PROBLEMS

1. Water Quality Standards for the Red River of the North have not been approved.

2. The nondegradation statement has not been approved.

3. A few communities have fallen behind their compliance date schedules for having waste treatment facilities in operation.

4. Operation of the Garrison Diversion Unit may create some pollution problems.

5. Staff and finances are not sufficient to meet State goals and objectives.

6. Waste treatment plant inspection frequency is below the desired level.

7. Participation in State comprehensive planning and special studies has been primarily in an advisory and review capacity.

8. Water pollution control budget reduced from last year's.

3. PROPOSED EXPANSION OR IMPROVEMENT

1. Man-years assigned to pollution control increased by nearly three-quarters of a man-year.
2. Three additional water quality monitoring stations are proposed.
3. Submit proposal to United States Department of Labor for utilization of CAMPS program.
4. Promote additional training of waste treatment operators and stress the need for operator certification.
5. Increase emphasis on feedlot and other agricultural wastes.
6. The industrial waste inventory is being updated.
7. The number of waste treatment plant inspections will be increased from 95 to 131.

4. STATUS OF WATER QUALITY STANDARDS

North Dakota's Interstate Water Quality Standards were approved with the exception of those for the Red River of the North. The State has adopted Intrastate Water Quality Standards. A proposed nondegradation provision has been submitted to FWPCA for review and comment. Standards for the Red River of the North are under consideration.

5. GENERAL INTERNAL ADEQUACY

The budget is insufficient to fully attain program objectives and overcome the identified weaknesses. The State indicates an expansion in their water pollution control staff of almost three-fourths a man-year, although the plan shows a reduction in the operating budget.

There does not appear to be any legal constraints which would affect their water pollution control program.

6. FWPCA PROGRAM ASSISTANCE FOR FISCAL YEAR 1970

1. Assist the State in the development and refinement of Water Quality Standards with particular emphasis on agricultural

standards, nondegradation statement, and development of acceptable standards for the Red River.

2. The State has requested FWPCA to establish two monitoring stations at border locations.

3. The State will be encouraged to utilize the FWPCA computerized monitoring data system (STORET).

4. Provide key State, local and privately employed technicians with essential training at Federal laboratories and research centers.

5. Provide FWPCA research and laboratory capabilities for specific problems or studies.

6. Assist, cooperate and provide information on special studies and research projects.

7. Assist in training operators in the State through the CAMPS program.

8. Provide assistance, cooperation, and encouragement in the broad field of comprehensive planning.

9. The State feels that the State Program Plan format was drawn up for the more populous states with correspondingly large numbers of employees and personnel in their water pollution control program and therefore, request that consideration be given to the capabilities of water pollution control agencies in sparsely settled states with limited personnel and budgets.

10. The State believes that FWPCA should coordinate all Federal programs in the field of municipal sewage collection and treatment to avoid duplication and confusion.

B. ANALYSIS OF PROGRAM ELEMENTS

1. PROGRAM INTRODUCTION

The State operates on a biennial budget and this is the first year program. The FY 1970 Program Plan indicates a total budget of $64,800, a decrease of $28,000 over last year. The decrease in operating funds is mainly attributable to the nonfunding in FY 1970 of a $16,000 FWPCA grant for the study of cheese wastes. Approximately 1½ man-years were assigned to this demonstration grant.

The total staff capability of 6.0 man-years assigned to water pollution control is an increase of .72 man-years over FY 1969.

No significant expansion of the water pollution control program is planned for the coming year.

2. PROGRAM AUTHORITY AND ORGANIZATION

The Department of Health, under the direction of the Water Pollution Control Board, has the responsibility for the control, prevention, and abatement of pollution of the surface waters of the State. As of July 1, 1969, ground water pollution was placed under the control of the State Water Pollution Control Board.

Legislation effective July 1, 1969, requires Health Department approval of sanitary facilities on boats having such facilities.

The State Water Pollution Control Board has set up a Feedlot Advisory Committee to review and make recommendations on the proposed standards for treatment of feedlot wastes.

There appears to be no legislative or organizational constraints that would adversely effect the development of a comprehensive water pollution control program.

3. POLLUTION CONTROL SURVEILLANCE AND ENFORCEMENT

3.1 Water Quality Standards and Compliance

North Dakota's Interstate Water Quality Standards were approved with the exception of the Red River of the North Drainage Basin. A proposed non-degradation provision has been submitted to FWPCA for review and comment.

The State has adopted Water Quality Standards for intrastate streams. They consist of minimum requirements for all surface waters in the State and some specific criteria on certain streams.

Tables 1 and 2 were prepared to evaluate State progress with respect to Water Quality Standards and compliance and to gage program goal accomplishments. Table 1 indicates the six communities having Water Quality Standards compliance dates have completed their projects; six communities have started corrective action and two have taken no action. Four municipalities listed in the FY 1969 Plan as an "A" priority have yet to take corrective steps.

In analyzing Table 1, the question is raised as to why the two municipalities (Abercrombie and Marmarth) having Water Quality Standards compliance dates but with no action taken are not listed as an "A" priority in the FY 1970 Plan.

As outlined in Table 2, industrial progress in pollution abatement has been good. Six of the 8 industries having Water Quality Standards compliance dates have completed projects.

With the exceptions noted above, North Dakota has complied with the implementation plan of its Interstate Water Quality Standards for both municipalities and industries. Two rivers (Red and Souris) did not comply with the Water Quality Standards last year. It is anticipated that the general overall quality of the Souris River water will be improved when the cities of Velva and Towner have completed construction of their waste treatment facilities in 1969. A study of two large Federal game refuges located on the Souris River is being done by FWPCA personnel in cooperation with North Dakota State Department of Health and the United States Bureau of Sports, Fisheries, and Wildlife.

A third draft of proposed rules and regulations governing feedlot waste is presently being considered by the Board.

Legislation effective July 1, 1969, requires Health Department approval of sanitary facilities on boats having such facilities.

Among proposed changes in the interstate water quality criteria is the addition of a nondegradation clause.

TABLE 1 - MUNICIPALITIES

Name of Municipality	Listed in FY 1969 Plan as an "A" Priority	Listed in FY 1970 Plan as an "A" Priority	WQS Compliance Date	Present Status
Abercrombie			7-1-70	No Action
Ellendale 1/ 2/			7-1-68	Completed
Fairmount 1/ 2/			4-1-68	Plans Approved
Fargo 2/			4-1-68	Completed
Grand Forks 1/	x			Planning
Kenmare 1/ 2/			7-1-67	Plans Approved
Marmarth 4/			7-1-68	No action
Stanton 2/ 1/	x		7-1-67 3/	Plans submitted
Towner 1/ 2/			7-1-67 3/	Contracts Award
Velva 1/ 2/			7-1-67 3/	Contracts Award
Walhalla 1/ 2/			7-1-67	Completed
Westhope 1/ 2/			7-1-67	Completed
Mayville 1/ 2/			4-1-68	Completed
Oakes 1/			7-1-67	Completed
Washburn 1/ 2/			7-1-67	Plans Approved
East Fairview	x			No action
Epping	x	x		No action
Gardner 1/	x			Auth. to Contrac
Karlsruhe 1/	x			Plans Approved
Minot 1/	x			Plans Approved
Nome 1/	x			Grant Offer
Robinson 1/	x			Plans Approved
Tolley	x	x		No action
Trenton	x			No action
West Fargo 1/	x	x		Priority Certif. From State
Argusville		x		No action
Arnegard		x		No action
Cavalier		x		No action
Center		x		No action
Christine		x		No action
Columbus		x		No action
Dazey		x		No action
Forman		x		No action
Grafton		x		No action
Lignite		x		No action
Mc Ville		x		No action
Marion		x		No action
Montpelier		x		No action
Northwood		x		No action
Oberon		x		No action
South Heart 1/		x		Grant Offer
Strasburg		x		No action
Warwick		x		No action

1/ FWPCA construction grants involved.
2/ Correction ordered by the State Water Pollution Control Board.
3/ Compliance date extended to 11/68 in 1969 Program Plan.
4/ Application Reported to be in preparation per quarterly status report.

TABLE 2 - INDUSTRIES

Name of Industry and Location	Listed in FY 1969 Plan	Listed in Water Quality Standards	WQS Compliance Date	Present Status
Rogers Bros. 1/ (Grand Forks)	x	x	4-1-68	Completed
Frito Lay 1/ (Grand Forks)	x	x	4-1-68	Completed
Pillsbury 1/ (Grand Forks)	x	x	4-1-68	Completed
State Mill 1/ (Grand Forks)	x	x	4-1-68	Completed
Missouri Valley Packing 1/ (Bismarck)	x	x	7-1-69	Plans Approved
Winger Cheese Inc. (Towner)	x	x	7-1-67	Will use city facility when completed
Taste Rite 1/ (Minot)	x	x	7-1-67	Completed
Western Cheese Co. (Oakes)	x	x	7-1-67	Completed

1/ Correction ordered by State Water Pollution Control Board.

(Note: An industrial waste inventory is being conducted by the State at the present time which will enlarge this listing.)

3.2 Water Quality Monitoring

The monitoring program as outlined in the FY 1968 and FY 1969 Plans remain essentially unchanged. A cooperative program is maintained at 30 sampling stations; this includes additional monthly sampling stations set up on the Red River at Wahpeton and Pembina. No change is planned in sampling frequency or laboratory methods and procedures.

The State sees the need for a FWPCA sampling station established on the Souris River where it enters the State from Canada; budgetary and personnel reasons does not allow the State to establish a station at that location. The State also requests a sampling station be established on the Yellowstone River where it enters the State below Sidney, Montana. This station would augment the present FWPCA operated station at Williston.

Consideration should be given to the use of the STORET system for processing of monitoring data.

3.3 Effluent Controls

North Dakota does not use a permit system. Control of effluents is basically exercised through State statute which requires the Pollution Control Board to review and approve plans and specifications for waste treatment facilities prior to construction. Effluent standards are required only for the Red River of the North.

Plant operating reports are not required. The City of Fargo, the only major city with mechanical treatment, has been requested to submit monthly operating reports.

A form for reporting waste stablization lagoon operation is being considered and will probably be used starting sometime in FY 1970. Both permits and operating reports should be required for all facilities.

Establishing a formalized rapid alarm system for pollution accidents and emergencies is desirable.

3.4 Inspection of Treatment Plants

The State inspected slightly more plants in FY 1969 (95) than in FY 1968 (83); or about 37 percent of the State's municipal and industrial plants. The Plan lists 131 inspections to be accomplished this year which would be about 51 percent of all municipal and industrial plants.

Although most of the waste treatment facilities are stabilization lagoons, a biennial inspection by the State is not adequate especially when no operating reports are required. All waste treatment facilities should be inspected at least annually and records of plant operation should be kept continuously. The records should include a mandatory requirement of reporting bypasses and other releases. Effluent analysis should also be made of major discharges from the waste treatment facility.

3.5 Certification of Waste Treatment Plant Operators

Certification of operators is a voluntary process through a program sponsored by the North Dakota Water and Pollution Control Conference. There appears to be some confusion as to the number of operators certified. The FY 1969 Plan shows 11 certified in 1968 and a total of 11. The FY 1970 Plan shows 11 certified in 1969 and a total of 12. Greater emphasis should be placed on operator certification with an eventual goal of mandatory certification.

3.6 Enforcement and Regulation

State statues provide adequate authority to enforce compliance; no formal enforcement actions have been initiated in the past two years. All of the 12 municipalities and 6 industries ordered to take corrective action as listed in the FY 1969 Plan and repeated in the FY 1970 Plan have initiated or completed correction as ordered. Four municipalities and two industries have completed corrective action since FY 1969 Plan submission. Of concern is the apparent delay by some municipalities in getting construction underway (Table 1). Marmarth has yet to take action even though compliance was set for July 1, 1968.

The proposed regulations on feedlot wastes, when passed, should strengthen the State pollution control program.

As of July 1, 1969, the State Water Pollution Control Board also has the responsibility for the protection of ground waters as well as surface waters.

Pollution resulting from highway construction should be evaluated to determine what problems, if any, exist. Control measures may be necessary.

4. WATER POLLUTION CONTROL FACILITIES

4.1 Review of Plans and Specifications

This section is identical to that submitted in FY 1969. The procedures followed in reviewing plans and specifications as related to the construction grant program are adequate.

It is anticipated that the Department will review plans during the next fiscal year for approximately 100 projects.

4.2 Municipal Construction Assistance

Financial assistance to municipalities is not provided by the State. The State does provide technical and administrative assistance to communities who wish to apply for Federal grants for construction and technical assistance in plant maintenance when requested.

The limited staff precludes the inspection of waste treatment plants during construction.

The State's technical construction assistance program appears satisfactory at this time.

4.3 Industrial Waste Treatment Assistance

The State does not provide financial assistance or tax incentives of any type to industry. It does provide technical assistance when requested and consults with industry to assure that proposed treatment works will meet the requirements.

4.4 Pollution Control Priorities

For FY 1970, 21 projects are listed as "A" priority and one as "B". Total cost for these is estimated at $1,042,000 which includes 10 municipal collection systems in addition to treatment works. The estimated construction grant entitlement for FY 1970 is anticipated to be $1,518,300, which would be more adequate to meet the State's needs as has been the case in the past years.

The five-year list shows 49 projects having a total estimated cost of $2,805,000 with 26 of these needing collection systems as well as treatment plants. Based on anticipated grant entitlements, there would appear to be more than adequate grant funds available.

One State institution is shown as a source of pollution and this is scheduled to be eliminated this calendar year. Federal installations are not checked by the State, and FWPCA reports are the source of this information. The State requests that Grand Forks Air Base plant operations be checked and effluent analysis be made by FWPCA. According to information received, the Air Force is attempting to acquire laboratory equipment to do routine testing.

One other facility, Garrison plant, should be included as having a need. The Intake structure is scheduled for improvement during FY 1970 and the Powerhouse during FY 1971.

The projects listed in the FY 1970 Program Plan are in accord with the immediate needs in the State and Water Quality Standards.

5. TRAINING

The State cooperates with the North Dakota State University in sponsoring and conducting an annual training course for waste treatment plant operators and technicians. Expansion of this course is anticipated in FY 1970. The State is investigating the possibility of utilizing the CAMPS program. A program of "vestibule" instructions and on-the-job training for 95 operators is proposed.

The U. S. Department of Labor has funded a project to train 40 operators in North Dakota during FY 1970. This is considered as a pilot project in making CAMPS resources available to training operators in the low pollution density areas of the Missouri Basin.

6. POLLUTION CONTROL STUDIES AND PLANNING

The industrial waste treatment inventory which was started in FY 1968 is being updated. Lack of personnel did not permit completion during the past year.

The report on waste treatment methods for treatment of potato processing wastes is being rewritten.

The study of methods to treat cheese processing wastes has been abandoned due to the loss of FWPCA demonstration grant funds for the second year of this three year project.

The FY 1969 Plan indicated the initiation of an inventory of combined sewers; however, no mention is made as to the status of this inventory in this year's plan.

The Department will cooperate with FWPCA and the U. S. Fish and Wildlife Service in a survey of the Souris River. The Department is also cooperating with the Souris-Red-Rainy River Basins Commission on the preparation of a comprehensive plan for water and related land resources, included in the plan is water quality management.

The Department of Health is not involved to date in the preparation of the State Comprehensive Plan. It would be to the Department's advantage as well as the State's pollution control program if they could take an active part in planning for future water use.

7. PUBLIC INFORMATION

There appears to be no formal public information program in the State. The Department's Division of Health Education assists in distributing information to the public on the program. The Department publishes and distributes the "Official Bulletin" which contains various information on pollution control and the water pollution control program of the State.

Agency personnel attend and participate in several programs and meetings during the year; such as the League of Women's Voters, Izaak Walton League and State Wildlife Federation.

A pamphlet entitled "Fifteen Years of Progress in Water Pollution Control in North Dakota" has been updated and distributed.

Numerous articles and pamphlets are used to provide information on the State's pollution control efforts.

FWPCA can continue to provide assistance to the State by forwarding appropriate pollution information.

C. INTERNAL ANALYSIS

GENERAL

The State has generally met its most pressing municipal and industrial waste treatment needs on a timely basis. Of the 14 municipalities and 8 industries cited in their Water Quality Standards implementation plan, only two communities have yet to initiate any corrective action and one of these is a year away from its compliance date. Twelve projects have now been completed.

It is anticipated that the one exception to the State's Water Quality Standards will be eliminated this fiscal year. A nondegradation provision has been submitted to FWPCA for review and comment.

While the State has the staff and finances to solve its most pressing problems, they are not sufficient to meet State goals and objectives.

Water pollution activities are limted due to the majority of personnel performing work other than pollution control. Additional full-time basis technical personnel are needed.

The State should seriously consider requiring discharge permits and operating reports along with annual inspection of treatment plants.

The overall State plan is considered adequate with no major deficiencies noted. Based on past actions, plans for the coming year warrant favorable consideration.

EVALUATION RATING

The State's overall rating is adequate. Taking each program element independently, the ratings would be as follows:

Program Authority and Organization - Adequate

Water Quality Standards and Compliance - Adequate

Water Quality Monitoring - Adequate

Effluent Controls - Adequate

Inspection of Treatment Plants - Marginal

Certification of Waste Treatment Plant Operators - Poor

Enforcement and Regulation - Adequate

Review of Plans and Specifications - Adequate

Municipal Construction Assistance - Adequate

Industrial Waste Treatment Assistance - Adequate

Pollution Control Priorities - Adequate

Training - Adequate

Pollution Control Studies and Planning - Marginal to Adequate

Public Information - Adequate